

CLASSIFIED MESSAGE

ROUTING

ORIG: [REDACTED] ad  
 UNIT: MD/OSA-DD/S&T  
 EXT: 5709  
 DATE: 30 AUGUST 1963

S-E-C-R-E-T

1	MD/OSA	9
2	D/FA/OSA	10
3	C/PS/OSA	11
4	OD/OSA	12
5	OD/OSA	13
6	OD/OSA	14
7	CD/OSA	15
8	RB/OSA	16

TO: [REDACTED]  
 FROM: [REDACTED]  
 CONF: [REDACTED]  
 INFO: [REDACTED]

OSA 1-15

John

P	DEFERRED	PRIORITY	INITIALS
X	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

OUT 17855X1

TO

INFO

CITE

IDEALIST

1. AM CONSIDERING A PROPOSAL FROM [REDACTED] GENERATED BY FOG  
 REQUIREMENT TO MODIFY THE R-44 SEXTANT FOR IMPROVED ACCURACY AND  
 RELIABILITY. COST OF MOD WILL BE QUITE LARGE. WOULD APPRECIATE  
 YOUR COMMENT ON ANY OPERATIONAL OR MAINTENANCE PROBLEMS YOU ARE  
 HAVING WHICH WOULD JUSTIFY THE NEED FOR US TO PARTICIPATE IN PRODUCT  
 IMPROVEMENT THIS ITEM. YOUR USAGE FACTOR WILL ALSO HAVE A BEARING  
 ON THIS JUSTIFICATION.

## 2. ACCURACY IMPROVEMENTS WOULD ENCOMPASS:

- A. MORE PRECISE ELEVATION GEAR TRAIN USING STAINLESS  
STEEL GEARS IN LIEU OF BRASS.
- B. NEW BEARINGS OF CLOSER TOLERANCE.
- C. SMALLER BUBBLE WITH WANDER AND SIZE CHANGE ELIMINATED.
- D. IMPROVED AVERAGER WITH ELIMINATION OF CABLE BACKLASH.

## 3. RELIABILITY AND MAINTENANCE IMPROVEMENTS WOULD ENCOMPASS:

- A. BUBBLE SHELF LEVELLING.

THE BUBBLE CAN BE LEVELLED ON THE BENCH AND LOCKED IN POSITION

COORDINATING OFFICERS

S-E-C-R-E-T

RELEASING OFFICER

GROUP 1  
Excluded from automatic  
downgrading and  
declassification

AUTHENTICATING OFFICER

REPRODUCTION BY OTHER THAN THE ISSUING OFFICE IS PROHIBITED.

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ROUTING			
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APPROVED	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

TO :

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TO

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CITE

REQUIRING ONLY THAT IT BE CENTERED WHEN CALIBRATING.

**B. NEW HOUSINGS.**

THIS WILL PERMIT EASIER AND FASTER ALIGNMENT THROUGH SEPARATION OF UPPER AND LOWER HOUSINGS.

**C. BUBBLE LIGHTING.**

NEW MODULAR ASSEMBLY CAN BE REPLACED IN AIRCRAFT.

**D. NEW BUBBLE.**

READJUSTMENTS FOR SIZE AND THERMOSTAT REPLACEMENT WILL BE MINIMIZED.

**4. OPERATOR PRESENTATION IMPROVEMENTS WOULD INCLUDE:**

**A. INSTALLATION OF A PELLICLE TO REPLACE THE BEAM SPLITTER.**  
THIS WILL ELIMINATE GHOST IMAGES.

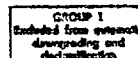
**B. SMALLER BUBBLE.** THIS WILL MAKE IT EASIER FOR PILOT TO CENTER THE CELESTIAL BODY AND KEEP IT THERE THROUGHOUT OBSERVATION PERIOD.

**C. BUBBLE LIGHTING.** SHARPER ILLUMINATION WILL ENABLE MORE ACCURATE PILOT OBSERVATION.

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D. BETTER QUALITY IMAGE. ALL OPTICAL ELEMENTS WILL HAVE NEW EFFICIENT COATINGS WHICH WILL INCREASE TRANSMISSION AND IMAGE QUALITY THROUGH THE SYSTEM.

5. IN ADDITION TO THE ABOVE, A SKY COMPASS CAN BE INCORPORATED IN THE SEXTANT TO GIVE ADDED HEADING COVERAGE DURING THOSE PERIODS WHEN CELESTIAL BODIES ARE NOT AVAILABLE FOR OBSERVATION. THIS WOULD BE OF PRINCIPAL BENEFIT DURING TWILIGHT PERIODS IN NORTHERN LATITUDES.

6. PLEASE SUBMIT YOUR COMMENTS BY 10 SEPTEMBER 1963.

END OF MESSAGE

C/ OD/OSA

25X1

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AC/HD/OSA

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